

THE CHINESE SPECIES DESCRIBED IN MEYEN'S
"OBSERVATIONES BOTANICAE" (BEITRÄGE
ZUR BOTANIK)

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PARTLY because certain Chinese species described in Meyen's "Observationes botanicae (Beiträge zur Botanik)" have been overlooked, partly because others have never been definitely placed, and partly because still others have been accepted as valid, although it is reasonably clear from their descriptions that they are but synonyms of other species, it has been thought expedient to make a somewhat critical study of them. The various Philippine species of flowering plants based on Meyen's collections have for the most part been disposed of in a satisfactory manner, either as valid species or as synonyms of previously described ones, as indicated in my "Enumeration of Philippine flowering plants." The status of these Philippine species was for the most part determined by an actual examination of their types in the Berlin Herbarium.

Meyen was primarily a plant physiologist. In 1830-32 he served as surgeon on the German ship "Prinzess Louise" on a trip around the world. Wherever stops were made he took advantage of the opportunity to collect botanical material. A detailed account of his journey was published in 1834-35.¹

In his published "Reise" Meyen included various observations on the vegetation of the countries visited, on individual species observed, and incidental to his narrative actually named and described a number of new plant species. Pages 292 to 400 of volume two of this work are devoted to his observations on China, as the result of his two stops in Kwangtung Province, August 15 to September 2, and November 11 to December 12, 1831. But a single new binomial appears in these pages, *Aralia trifoliata* Meyen, and this a *nomen nudum*; Walpers later placed it as a synonym of *Panax aculeatus* Ait. = *Acanthopanax trifoliatus* (Linn.) Merr.

The Chinese plants that Meyen collected and on which the descriptions discussed below were based, were secured mostly at Macao and on neighboring small islands, at Cape Syng-moon on Lantao Island, Hong-

¹Meyen, F. J. F. Reise um die Erde, ausgeführt auf dem Königlich Preussischen Seehandlungs-Schiffe Prinzess Louise, commandirt von Capitain W. Wendt, in den Jahren 1830, 1831 und 1832. 1: i-viii. 1-493. 1 t. 1 map, 1834; 2: i-vi. 1-411, 1 map, 1835.

kong New Territory, and Lintin Island, Canton River, near Hongkong. One of the new species was collected at Canton, and one on Lippas (Lappa) Island near Macao. From Meyen's own account of his journey it is safe to assume that the considerable number of his specimens that are cited merely as coming from "China" were collected at some one of the several localities listed above, and mostly at Macao, and on Lantao and Lintin Islands. These localities are all within a few miles of Hongkong. At the time of Meyen's visit, Hongkong Colony did not exist, Hongkong Island having been ceded to Great Britain in 1841, and the Colony chartered in 1843. The foreign commerce with southeastern China, up to the time of the establishment of Hongkong, was largely through the small Portuguese colony of Macao and with Canton.

The "Observationes botanicae"¹ is a composite work published after Meyen's death. The contributors were Ratzeburg, Grisebach, Klotzsch, Flotow, J. Meyen, Miquel, Nees von Esenbeck, Schauer, Vogel, and Walpers. In some cases Meyen is given as the joint author of certain species, notably in association with Nees von Esenbeck and with Walpers. In this work six new genera and about fifty new species of Chinese plants were characterized as new. It is with these new forms that I have concerned myself in the present paper. No attempt has been made to consider those records given in the form of previously described species, as usually no descriptive data are given. Apparently most of them were correctly named.

This study is based primarily on a critical examination of the descriptions in comparison with extensive collections of plants from Kwangtung Province. In some cases, as mentioned in the text, I am under obligations to Dr. J. Mattfeld of the Berlin Botanic Garden, who kindly searched for the types of certain species and made the necessary critical comparisons. In a very few cases the actual types could not be located, either because they have been lost or misplaced, or because the species represented has been transferred to some other genus without leaving a cross reference slip.

The references to Hemsley are to Forbes and Hemsley's "An enumeration of all the plants known from China proper . . ." *Jour. Linn. Soc. Bot.* **23**: 1-521. *t.* 1-14. 1886-1888; **26**: 1-592. *t.* 1-10. 1889-1902; **36**: i-xi. 1-686. 1903-1905; those to Dunn and Tutcher to their "Flora of Kwangtung and Hongkong (China)." *Kew Bull. Add. Ser.* **10**: 1-370, map. 1912.

¹Meyen, F. J. F. Beiträge zur Botanik gesammelt auf einer Reise um die Erde. Nach dessen Tode von den Mitglidern der Akademie fortgeführt und bearbeitet. Observationes botanicae, in itinere circum terram institutae. Opus posthumum, sociorum academiae curis suppletum. *Nova Acta Acad. Leop.-Carol. Nat. Cur.* **19**: Suppl. 1: i-xxxii. 1-512. *t.* 1-13. 1843.

One of the results of this study is the reduction to synonymy of about twelve species that Hemsley accepted, usually without comment, in his enumeration of Chinese plants. *Vernonia Gomphrena* Walp. = *Blumea obliqua* (Linn.) Druce, has not been found by any collector in China since Meyen secured it on Lintin Island in 1831; it seems likely that this was a casual introduction from India or Ceylon that may not have persisted. *Scleria pratensis* Lindl. = *S. pterota* Presl is to be excluded as a Chinese species, the Chinese record apparently having been based on an erroneously localized plant. *Ferula marathrophylla* Walp., very inadequately characterized, remains of entirely doubtful status, while *Aster Walpersianus* Nees cannot at present be associated with any other known Chinese species of the genus.

LICHENES

Ramalina digitata Meyen & Flotow, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 212. t. 3. f. 1. 1843." Ad ramos Theae chinensis, tum in horto botanico Rio Janeiro urbis Brasiliae, tum in imperio Chinensi prope Canton."

Ramalina geniculata Hook. f. & Taylor, Lond. Jour. Bot. 3: 655. 1844; Zahlbr. Cat. Lich. Univ. 6: 490. 1930.

Zahlbruckner placed *Ramalina digitata* Meyen & Flotow as a doubtful synonym of *R. geniculata* Hook. f. & Tayl. J. Mueller, however, (Revisio Lichenum Meyenorum. Jahrb. Bot. Gart. Berlin 2: 310. 1883) on the basis of an examination of the Brazilian specimen (he did not see the Canton one) cites Nylander's recognition of it as related to *R. pumila* Mont. and states: "sed planta nihil nisi var. gracilis et tenuis divisa videtur **Ramalinae geniculatae** Hook. et Tayl." In view of Mueller's eminence as a lichenologist it is believed that this disposition of the species should be accepted. Most lichenologists accept *Ramalina geniculata* Hook. f. & Tayl., but *R. digitata* Meyen & Flotow is a valid name, and is one year older than that of Hooker f. & Taylor.

FUNGI

Fusarium Caries Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 478. 1843 "In spicis Meoschii lodicularis [*Ischaemum aristatum*] Chinae: Cap-Lintin."

Saccardo, Syll. Fung. 4: 725. 1886, merely lists this as a species of doubtful status unknown to him, erroneously crediting it to Chile. Wollenweber & Reinking, Die Fusarien 320. 1935, merely state: "non *Fusarium*." The problem of its identity is one for some mycologist to solve.

POLYPODIACEAE

Pteris ensiformis Burm. f. Fl. Ind. 230. 1768.

Pteris ensiformis Goldm. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 457. 1843. "China" (syn. nov.).

Goldmann described this as a new species overlooking Burman's use of the same specific name for the same species. Christensen enumerated *Pteris ensiformis* Goldm. but suggested no reduction. An excellent photograph of Goldmann's type in the Berlin Herbarium, courteously supplied by Dr. Mattfeld, enables me to make this reduction with confidence as to its correctness. The type is a single fertile frond, a very few of the lower pinnules sterile. The rachis is not winged as in *P. multifida* Poir. and in *P. dimorpha* Copel. Philip. Jour. Sci. 3: Bot. 282. 1908; Ching, Ic. Fil. Sin. 1: 69. t. 34. 1930, the type of Copeland's species being from Kwangtung. Ching observes that *P. dimorpha* Copel. is more or less intermediate between *P. multifida* Poir. and *P. ensiformis* Burm. f.

LYCOPODIACEAE

Lycopodium cernuum Linn. Sp. Pl. 1103. 1763.

Lycopodium amentigerum Goldm. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 468. 1843. "China" (syn. nov.).

From the short description this seems clearly to be a form of the widely distributed Linnaean species which is very common in Kwangtung Province. Goldmann's species was not accounted for by Spring in his "Monographie de la famille des Lycopodiacees" (1842-49), nor by Baker in his "Handbook of the fern-allies" (1877).

GRAMINEAE

Andropogon intermedius R. Br. var. **Haenkei** (Presl) Hackel in DC. Monog. Phan. 6: 486. 1889.

Andropogon Vachellii Nees in Hook. & Arn. Bot. Beechey Voy. 243. 1838; Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 188. 1843 "In vicinia urbis Macao imperii Chinensis et in insulis adiacentibus."

The description of 1838 is an ample one, but much of it is repeated in that of 1843. Hackel made the reduction of *A. Vachellii* Nees to *A. intermedius* R. Br. var. *Haenkei* (Presl) Hackel, but Rendle, Jour. Linn. Soc. Bot. 36: 373. 1904, recognized only R. Brown's species as occurring in China, not the variety.

Arundinella setosa Trin. Gram. Pan. 63. 1826; Keng, Nat. Centr. Univ. Sci. Rep. B 2: 56. 1936.